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Dear Sir/Madam,

RESPONSE OF SUFFOLK COASTAL AND WAVENEY DISTRICT COUNCILS AND SUFFOLK COUNTY COUNCIL TO THE STAGE 3 CONSULTATION BY SCOTTISH POWER RENEWABLES (SPR) ON THE EAST ANGLIA ONE NORTH (EA1N) AND EAST ANGLIA TWO (EA2) OFFSHORE WIND FARMS (CONSULTATION PHASE 3.5).

Executive Summary

The connection offered by National Grid Electricity Transmission (NGET) at this sensitive section of coast has resulted in the local authorities having to choose between the **least worst** option for the location of the substations and associated connection infrastructure. The local authorities consider that neither site is without major concerns and these concerns include the way in which the identification of this area for the electrical connection was taken without more careful consideration of the potential environmental impacts of the development upon a very sensitive area.

The Broom Covert, Sizewell site lies in the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) and therefore would only be acceptable if it met the tests set out in National Policy Statement (NPS) EN-1. It is the local authorities' view that although the Friston site lies outside the AONB, the development of this site would be hugely detrimental resulting in significant impacts which would be extremely difficult to mitigate. In addition to the impacts experienced at the substation site, the longer cable route associated with this site selection and the challenges and impacts involved, result in the local authorities being of the opinion that the Friston site is not an effective alternative in policy terms. While the development of the Sizewell site will cause some harm, it is however argued that the extent of this harm can be lessened by the co-location of the infrastructure with existing large scale infrastructure. There is also considered to be greater opportunity to minimise and mitigate the harm caused including to the AONB, by virtue of the proximity of the site to the landfall, nature of the site and landform, capacity of the site to accommodate lowering bed levels, existing planting and potential new planting. Although it is recommended that further work is undertaken prior to a decision being taken by SPR, based on

the information available, the local authorities offer greater support to the selection of the Broom Covert, Sizewell site.

Introduction

The local authorities welcome the opportunity to comment formally and publicly on the proposals for the third and fourth phase of offshore wind farm developments forming the East Anglia Array. The comments contained in this representation apply equally to both East Anglia One North and Two projects hereafter referred to as EA1N and EA2

We have participated fully in the previous process for the East Anglia One offshore windfarm (currently under construction) and the East Anglia Three offshore wind farm (consented) and we look forward to continuing to co-operate in discussions for EA1N and EA2.

SPR held a series of public meetings in October 2018. The timing of the public meetings in relation to the projects is accepted given the requirement to access the maximum local population. The lack of printed information available for attendees to take away and digest was again disappointing, but it is understood that hard copies of the Phase 3.5 booklet were provided to a number of local residents. The limited length of the original consultation period was a significant concern to local residents and the local authorities, the extension of the deadline until 12th November (6 weeks total) was therefore welcomed.

The local authorities highlighted in their Phase 3 response significant concerns in relation to the crossover in onshore construction of the interconnector proposals (Eurolink and Nautilus – National Grid Ventures) and construction of the new nuclear power station at Sizewell C (EDF Energy) with the offshore wind farm projects. In addition to this, the local authorities are also mindful of the public proposals from The Crown Estate to make available seabed for the extension of existing wind farms around the East Anglian coast potentially including Greater Gabbard and Galloper, both of which connect to the National Grid at Sizewell. The Crown Estate is also consulting the market and statutory stakeholders such as Natural England, on a further 6GW of new seabed leases for offshore wind. Preliminary information in the public domain has identified that Suffolk coast may be a region open to tender for some of this capacity. The implications for the local population and East Suffolk as a whole are significant. No new information has been provided with this consultation to alleviate these concerns.

Current position of the local authorities based on information to date

The Phase 3.5 consultation seeks to explore the use of the Broom Covert site at Sizewell as an alternative to the Grove Wood site at Friston, previously consulted upon in Phase 3. The local authorities welcome the inclusion of the alternative site, however we still consider that further work is required to fully evaluate the two siting options presented. No detailed landscape, ecological, archaeological, heritage asset, transport, flood risk, noise, air quality, ground contamination or socio-economic assessments of the projects have been provided. This has limited our ability to comment fully on the suitability of any site to date. In particular, there is a

need for a full Landscape and Visual Impact Assessment (LVIA) for each site to provide an objective assessment in relation to the landscape and visual impacts of the projects.

Notwithstanding the above comments, we are aware of SPR's constrained timescale in which to make a final decision on this matter and although it is recommended that further work is undertaken prior to a decision being made, we will provide a view based on the information currently available.

The local authorities have always considered that, given the national status of the AONB designation, it was important that the option to develop a substation site outside the AONB be tested. The Grove Wood, Friston site lies outside the AONB; the site comprises open countryside which is to be protected from development as detailed in Local Plan policy and the National Planning Policy Framework (NPPF). However, it is NPS EN-1, EN-3 and EN-5 which are directly relevant to this proposal.

As stated in NPS EN-1:

Development proposed within nationally designated landscapes

5.9.9 National Parks, the Broads and AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection and which the IPC should have regard to in its decisions. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the IPC in deciding on applications for development consent in these areas.

5.9.10 Nevertheless, the IPC may grant development consent in these areas in exceptional circumstances. The development should be demonstrated to be in the public interest and consideration of such applications should include an assessment of:

- *The need for the development, including in terms of national considerations, and the impact of consenting or not consenting it upon the local economy;*
- *The cost of, and scope for, developing elsewhere outside the designated area or meeting the need for it in some other way, taking account of the policy on alternatives set out in Section 4.4; and*
- *Any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.*

If the need for the development is accepted, in accordance with national policy it must then be considered whether;

- a) The overall cost and scope for developing the Friston site is so great as to render it an *unreasonable* alternative to a location within the AONB at Broom Covert; notwithstanding that the Friston site *may* be technically deliverable in some form. Therefore, whilst it can be

identified as an alternative studied, taking into account the impacts of the site, it should be discounted.

- b) The magnitude and degree of harm caused to the AONB by the use of the Broom Covert site does not, taking full account of paragraphs 5.9.9 and 5.9.10, render the project unsuitable in this location also. However, there remains a requirement for further testing in this area.

NPS EN-5 reinforces the developer's responsibility to give full consideration to the impacts of the development, to "have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and ... do what [they] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects."

Grove Wood, Friston – Cost of and scope for developing outside the AONB

Through the NGET CION (Connection and Infrastructures Option Note) process, SPR were offered a connection point on the Sizewell overhead power lines, thus severely limiting the scope for developing outside the AONB by the requirement to come onshore and connect to the grid at this very narrow and highly sensitive section of coast. This note has been made available, but it is not clear on any weighting given in the decision process and the local authorities are not involved in this process. The cost and scope for development outside the AONB will be explored in relation to the Friston site as this is the only alternative site outside the AONB being considered by SPR at this point.

The cable corridor

The siting of the onshore infrastructure on the Friston site will involve the construction and creation of a longer cable corridor, (the detail of which we do not yet have), and the loss of woodland to the south of a Grade II listed building. Having reviewed the proposals to take out the woodland to the south of Aldringham Court, Grade II listed building; the local authorities have stated on a number of occasions that we have serious concerns in relation to the adverse impact of this on the setting of the listed building. Full details were included in a previous response and as yet we have not been advised of any heritage assessment completed by SPR in relation to this important building. This information is urgently required to inform future discussions.

Initial study indicates that there may be sufficient space to construct a cable route through to the west that has capacity to accommodate four projects (two wind farms and two interconnectors). However, SPR and National Grid Ventures still need to complete significant technical work regarding constructability, value engineering and economic viability to ensure and be able to demonstrate to the local authorities that all four projects will be satisfactorily accommodated. Given the sequencing of the projects the local authorities have not been given any confidence that all projects could be accommodated. It is considered there is a risk that a second grid connection

would be required, or more likely that it would not be possible to parallel the cable corridors for both the SPR and interconnector projects along their entire length, especially at the Aldeburgh Road.

If the destruction of the woodland south of Aldringham Court is the only acceptable location to access the Grove Wood site, then the local authorities remain concerned and of the view that we would have great difficulty supporting a route through to this site at this location.

In addition, it is likely that during construction there may be significant disruption to the local highway network in facilitating delivery of this cable route. One of the main roads to Thorpeness is likely to be disrupted during construction and we have yet to receive details on how this will be managed or mitigated. This is a popular tourist area and any disruption, particularly through the summer months, could have a significant impact on the tourist economy and visitor reliant businesses in Thorpeness.

The substations site

The Grove Wood site comprises arable land consisting of a network of fields, the boundaries of which are predominantly defined by hedgerows. The landscape to the north of Friston including the site contributes to the setting of the village. The projects would introduce incongruous large scale infrastructure into this valued rural landscape. Notwithstanding the pylons, the landscape currently has limited intrusions. The projects will result in the loss of boundary hedgerows, the substation for EA1N would involve the loss of a small area of woodland and the siting of the substation for EA2 would potentially require the removal of a section of Laurel Covert. No assessment of these features has been provided in relation to their quality, historical association or in relation to their ecological significance.

The consultation recognises the need for extensive planting. This is to be expected given the visually exposed location, the extent and scale of the proposals as well as the location and proximity of receptors. The need for extensive mitigation planting is a tacit recognition on the part of the applicant of the magnitude of change that the proposal would create in terms of both visual amenity and the character of this open countryside site and surrounding landscape. Based on the information presented to date, the local authorities are not satisfied that such planting would be timely or sufficiently effective in delivering acceptable mitigation.

The opportunity for screening potential is more limited on the Grove Wood, Friston site given the existing landforms. In addition to this, the restrictions in relation to the type of the planting in the areas around the National Grid overhead lines and cable and drainage routes may limit the screening potential of new landscaping. No information has been provided by SPR to date which would alleviate these concerns.

The site is in a quiet location where the day and night time noise levels are minimal. No information has been provided in relation to the noise impact, but the existing noise levels will comprise a difficult constraint during construction and on the substation noise output.

In addition to the impact of the cable route on Aldringham Court and its setting, there are also a number of designated heritage assets within 1km radius of the Grove Wood site. Locating the onshore infrastructure at this site would harm the significance and settings of some of these heritage assets. There are also a number of designated heritage assets in the wider vicinity whose setting would also be potentially impacted by the proposal by virtue of the scale of the development and the nature of the landscape.

There is also a concern that the projects are being progressed and decisions taken prior to the completion of archaeological assessments and subsequent impacts being properly understood. The surface water drainage area is proposed on a site flagged as having high archaeological potential (KND 009). A ruined chapel site is marked on early maps at this location and therefore there is potential for structural and human remains. A potential for preservation in situ of significant archaeological remains can already be identified for this option therefore full up-front evaluation would be required for this area. For this reason, it is strongly recommended that alternative locations for surface water drainage are considered.

The additional Grove Road realignment area includes a moated site (KND 011) which must not be disturbed by any re-alignment works. The new substation access site is also situated on the edge of a former green (Friston Moor- FRS 013), so there is potential for green edge remains here. The local authorities have significant concerns in relation to the development of the Grove Wood site and its impact on below ground heritage assets.

The permanent access point for the Grove Wood site would involve a long access road cutting through the landscape. It is not yet known how this would be mitigated.

The pluvial flood path runs from north of Friston down through the village centre. It is not yet known how the proposed substation location will interact with this flow path, it appears that the National Grid substation sits directly upon it. Drainage is of significant concern to local residents' and further detailed information is required.

The land which comprises the Grove Wood site is arable. The impact of the loss of this land from existing agricultural businesses is unknown. The projects may potentially provide some short term employment opportunities during the construction phase but the longer term employment opportunities are limited. In addition to the impact on the agricultural enterprises, the impact on tourism is a significant concern. Friston lies within beautiful countryside surrounded by popular footpaths and cycle routes. Further work is therefore necessary to ensure the rural economy is protected.

From a social perspective, Friston is a small rural community with limited local facilities, large scale infrastructure would be alien in the location proposed and the potential harm to the local community arising from this during construction and operation needs to be assessed.

In conclusion, there are considered to be significant costs which would arise as a direct result of developing the Friston site.

Broom Covert, Sizewell – Detrimental effect on the environment and mitigation potential

Cable corridor

It remains the local authorities' view that the Broom Covert site still requires further investigative work. Insufficient information has been provided at present to allow a full assessment of the impact of the cable corridor, especially in relation to its impact on the AONB. Notwithstanding this, there are considered some potential advantages that the Broom Covert site may be able to provide, which have been detailed alongside potential harm.

The shorter cable corridor to Broom Covert would help to minimise the impacts of construction and operation of the site and the cable corridor on local communities and public/residential amenity - although there would be additional challenges in sharing a construction route with EDF Energy construction traffic for Sizewell C and this would need to be mitigated and potentially compensated for.

Although the shorter cable route would alleviate some of the potential disruption caused to the main road into Thorpeness, disruption would still be caused during the works at the landfall. The same comments in relation to this aspect would therefore apply as those given in relation to the Friston site.

The shorter cable length would also reduce the permanent loss of habitat and the severance of ecological corridors. However, further work on this, including any habitat mitigation or compensation that may be required, will be needed.

The harm to both archaeological features and the setting of heritage assets will also be reduced by virtue of the shorter cable route, additional work on cable runs and their exact siting will be required to explore this further.

Finally, the length and direct nature of the cable run will help to minimise the technical risks to the delivery of a shared connection and joint siting of all projects, subject to further information and detailing, relating to all of the proposals.

The substations site

The Broom Covert site has the potential to minimise the magnitude of landscape change at the connection site, given the presence of an existing energy cluster of a comparable scale. This is a key advantage which sites on the western side of the site search area do not have in comparison. Notwithstanding this, the site sits within the AONB and therefore is given the highest status of

protection in relation to landscape and scenic beauty. The full impacts of the development on the special qualities of the AONB are yet to be assessed. The in-combination impacts on the AONB of the energy developments must also be considered, in addition to the impact of the development on the connectivity within the AONB landscape.

Despite the challenges faced in relation to the impact on the special qualities of the AONB and landscape connectivity, this site does offer opportunities for dense planting of conifers which provide comparatively rapid and effective screening and the opportunity to modify the landform to dig in the structures. This would be appropriate for both the character of area and the sandy soil type.

Sizewell Marshes Site of Special Scientific Interest (SSSI) and Leiston-Aldeburgh SSSI lie to the north and south of the Broom Covert site. The drainage route shown for the site illustrates that water would be discharged into Sizewell Marshes SSSI and therefore significant further information in relation to this strategy would be required specifically in relation to how the surface water would be treated prior to discharge.

As with the Grove Wood site, limited information has been provided in relation to surface water drainage. There has however, been no significant risk of pluvial flooding identified on the site and the British Geological Survey website would suggest that the soils on the site are permeable, although further investigation would be needed. It is therefore likely that a suitable surface water drainage strategy compliant with the Sustainable Drainage System (SuDS) hierarchy could be identified, which would have minimal risk to populated areas.

The site's positioning adjacent to the Galloper and Greater Gabbard offshore windfarm substations and close to the Sizewell B nuclear power station has an impact on the background noise environment, which already exists. The higher background noise levels in the locality would potentially help to lessen the noise impacts of the projects. This will need to be assessed fully in order to provide a comparison. However, tranquillity of the AONB must not be **significantly** compromised by additional development.

There is potential for this site to utilise the better road network close to Sizewell to reach any haul roads and the new substations during the construction and operational phases.

There are no listed buildings within the vicinity of this site and therefore the development of this site could help to minimise harm caused to these designated heritage assets and their settings by the substation developments. Further work is however necessary considering any historic boundaries or landscape features. Investigatory works have been undertaken in relation to the Greater Gabbard, Galloper and Sizewell C developments all of which have identified archaeological remains. It is therefore important that further archaeological investigatory work is undertaken, but

there is considered to be a significant benefit to below ground heritage assets by the co-location of multiple energy projects.

The proximity of the site to the Sizewell C area may offer potential opportunities to utilise soil which will need to be stripped from EDF Energy land as part of the Sizewell C development for bunding purposes. This would need to be explored further with EDF Energy from a timing perspective.

The permanent access for the Broom Covert site is identified along the western boundary of the site. At present, it is not clear as to whether opportunities to utilise and share the existing Galloper and Greater Gabbard access have been explored and this should be done. The identified access point would however provide direct access to the site.

The Broom Covert Site would not directly necessitate the compulsory purchase of land from one or more farm holdings, and therefore would not create the adverse impacts that could be expected from this at the Friston site. Although agricultural land may be required to provide replacement reptile habitat, this will be secured on a commercial basis by negotiation and therefore will be integrated, rather than imposed on one or more existing farm businesses.

The AONB is a tourist attraction in its own right and has a number of tourist's footpaths across it. The potential disruptive impact the projects could have, alongside other future energy related construction projects such as Sizewell C on the tourist economy in the locality is a significant concern. Further assessment of this impact is therefore required. The local authorities recognise that the cumulative impacts of the development in combination with Sizewell C and other energy projects could be more concentrated if the onshore development is at Broom Covert. No information has been provided in relation to the in-combination impacts. We are also mindful of the small hamlet that is Sizewell and the existing large scale infrastructure that can dominate the area.

In summary, notwithstanding Broom Covert's positioning within the AONB and proximity to Sizewell Marshes and Leiston-Aldeburgh SSSI, it is considered that this site offers greater opportunities for effective mitigation than the Friston site.

Highways

In highway terms, if this proposal is taken in isolation, the preferred location for the substations would be at Sizewell. This location benefits from access via an accepted HGV route and a shorter cable route requiring fewer vehicle movements. Thus, consideration of this option as phase 3.5 of the consultation is welcomed. However, if constructed concurrently with Sizewell C there could be benefits to locating the sub stations at Friston. This would distribute traffic over a wider part of the network avoiding congestion on any particular route. For either option the Highways Authority will carefully consider the impacts and necessary mitigation to reduce these to an acceptable level.

Further more detailed highway comments are included in the appendix.

Connection to overhead lines

Based on the experience of the local authorities on other energy related projects we would anticipate that sealing end compounds would be necessary at both sites. These are required immediately adjacent to the overhead lines to allow connection of the substation to the electricity network. The siting and layout of these will need to be such that they can be effectively screened and incorporated into the wider landscape. No information has been provided in relation to this infrastructure and therefore the impact of these is unknown. Without this information it is difficult for the local authorities to make a proper assessment of the possible impacts. The local authorities' recommendation for their preferred site has had to be taken without full knowledge of the details of this equipment. If such connections need to be made outside the areas shown in the consultation material, then this may affect the local authorities' conclusions.

Size of National Grid sub-stations

Following work on proposals elsewhere in Suffolk, the local authorities are aware that the scale of the National Grid sub-stations can be considerably reduced if the technology used is a Gas Insulated Sub-Station (GIS) rather than Air Insulated Sub-Station (AIS). This could also create more flexibility in accommodating all of the required infrastructure on a particular site and reduce the need to break up farm estates. In addition, it may well be possible to design a building that is more appropriate for the area than the open structures associated with AIS. It is acknowledged that this is a more expensive option but, given the significant impact that the proposals for the National Grid and SPR sub-stations have at both locations, it should be incumbent on the developers to employ whatever means are possible to ensure that the impact of their schemes are minimised. In other locations, the Secretary of State has found that it is appropriate to require a GIS technology rather than AIS.

The local authorities preferred option based on the information presented to date

As stated previously, the requirement to come onshore and connect to the grid at this sensitive section of the coast has resulted in the local authorities having to make a choice of the least-worst option for the location of the substations and associated connection infrastructure, when both options currently being considered have drawbacks.

It is recognised that the development of Broom Covert site within the AONB would only be acceptable if it met the tests in NPS EN-1. Firstly, whether the cost of developing outside the AONB (at Grove Wood Friston, in this case) outweighed the policy considerations and secondly, whether the degree of harm caused to the AONB, taking mitigation into consideration by developing the Broom Covert site renders the project unsuitable in this location also.

The development of the Grove Wood site, although outside the AONB, would be hugely detrimental resulting in significant visual, landscape, and economic impacts alongside significant

heritage, archaeological and ecological impacts not yet fully considered by the project. As a result of these environmental and other adverse effects the local authorities consider that the cost of developing the Friston site is significant. The site also appears to be the hardest to mitigate in landscape terms. In addition, there is the disruption caused by a longer cable route and the uncertainty resulting from the lack of knowledge of the impact on the environment, in particular the narrow gap at Aldeburgh Road. Based on the information provided so far, it cannot therefore be considered a genuine or effective alternative in policy terms. The local authorities view on the Grove Wood site remains unchanged from the response provided at Phase 3.

The development of the Broom Covert site would inevitably cause some harm to the AONB. The extent of this harm is arguably lessened to a degree by its positioning adjacent to existing energy and possible future energy infrastructure in the form of Sizewell C. The local authorities also consider, given the character of the site and landform, the existing planting and the capacity of the land to accommodate lowering of bed levels, that the extent and magnitude of harm to the character of the AONB is likely to be capable of being minimised and mitigated to a significant extent in a timely fashion. The close proximity of the site to the point of landfall will also result in a significantly reduced cable route. It has however been highlighted that further investigatory works are necessary.

Prior to SPR making a decision on final site selection, the local authorities recommend the following actions:

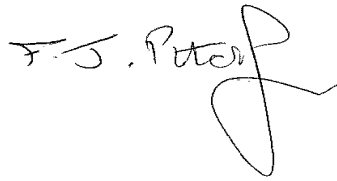
- **An LVIA is undertaken on the Grove Wood, Friston site and Broom Covert, Sizewell site to allow the landscape and visual impacts of the development on both sites to be fully understood.**
- **Further work is undertaken to fully understand the impact of the Aldeburgh Road crossing on Grade II listed Aldringham Court and its setting and in terms of the ensuring all four projects (wind farms and interconnectors) will be able to be accommodated.**
- **Further work is undertaken in relation to the connection works and infrastructure layout involved to connect the substation at Broom Covert, Sizewell to the electricity network.**

The local authorities' view based on the information received to date, notwithstanding the above recommendations, is that greater support can be offered to the selection of the Broom Covert, Sizewell site over the Grove Wood, Friston site.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Philip Ridley', with a large, sweeping underline.

Philip Ridley BSc (Hons) MRTPI
Head of Planning & Coastal Management
Suffolk Coastal and Waveney District Councils

A handwritten signature in black ink, appearing to read 'John Pitchford', with a large, looping flourish at the end.

John Pitchford BA DipTP MRTPI
Head of Planning
Suffolk County Council

Appendix 1 - Consultation 3.5 – Further comments on matters of detail

The main body of the response focused on the consideration of final site selection for the project. The local authorities however have further comments to provide in relation to the site selection process and further detailed onshore considerations. No new information has been provided in relation to the offshore impacts; the comments provided previously therefore remain relevant.

The site selection process to date

The site selection area for the onshore elements of the projects has been further assessed following the previous round of public consultation (Phase 3). In pre-application discussions with SPR and previous rounds of consultation, the local authority officers had requested that SPR extend their area of search beyond the area previously defined. This request was made to ensure that all reasonable options to accommodate the projects were considered, having particular regard to the need to minimise harm and identify a site which could potentially accommodate both SPR and the interconnector projects alongside each other, helping to minimise the overall impact of the proposals.

In response to this, SPR's inclusion of the Broom Covert, Sizewell site as an alternative to Grove Wood, Friston is welcomed. The Broom Covert site, although located within the Suffolk Coast and Heaths AONB sits adjacent to the Greater Gabbard and Galloper offshore wind farm substations, offering an opportunity to site onshore infrastructure in close proximity to similar infrastructure in a location already screened by existing landscaping and with the potential for additional screening by further planting. The site it is hoped will also offer the opportunity to accommodate the future interconnector projects.

Notwithstanding the above, the local authorities remain concerned that the selection process that concluded that, at Stage 3, Grove Wood site is the preferred option remains a fundamentally flawed process. At a basic level, carrying out the RAG (Red/Amber/Green) assessment against AONB special qualities and key characteristics will inevitably show a preference for sites outside the AONB and which do not necessarily have those special qualities that the AONB has and which could be harmed by the development proposed. However, the Grove Wood site does have its own inherent special qualities which have not been fully assessed and to which harm could be caused by the development. In addition, the existing detractors from AONB special qualities that exist around the original eastern area sites have not been fully factored in the assessment as the actual baseline rather than a theoretical special quality ideal.

Furthermore the local authorities have previously identified a number of principles which it was considered should be adhered to in the site selection process and mitigation for the onshore elements of the project. These are listed below with commentary as to whether or not we consider SPR has appropriately considered these principles in their site selection process.

Site selection should seek location/locations which minimises visual harm to the landscape, recreational, and residential receptors. This may be achieved through:

- a) A close visual relationship to the existing built environment - The choice of the Grove Wood site does not achieve this; the site sits on open arable farmland to the north of Friston village. This can be more successfully achieved at the Broom Covert site, positioning the infrastructure adjacent to the existing substations of Greater Gabbard and Galloper and alongside the nuclear power station developments of the A and B stations and the future C station (recent reports state construction on the C Station due to commence in 2021).
- b) The screening by existing blocks of woodland or belts of trees - The Grove Wood, Friston site is to the west of Grove Wood and ancient woodland which may provide some screening to the project. However to the south, north and west of this site there is limited natural screening potential. There is planting along the southern and western boundaries of the Broom Covert site which provides significant established screening. There are also opportunities to provide meaningful screening to the north of the Broom Covert site.
- c) A location that offers the ability to minimise the need for the additional building height required by noise attenuation structures and allows the bed levels of buildings and structures to be lowered - There are residential properties close to both sites which may necessitate noise attenuation structures. There has not been adequate information provided to date to assess this. No evidence has been submitted to date with regards to potential for lowering bed levels of either site, it is considered that the nature of ground conditions at the Broom Covert site may lend themselves to potential lowering of the floor levels.
- d) The minimisation of bulk and height of the structure(s) - This has not changed in relation to the Grove Wood site since the previous round of public consultation. Inadequate information has been provided to date to assess this in relation to the Broom Covert site, it is noted that the harmonic filters will require housing in a building up to 21 metres high on the Broom Covert site which would be 6 metres taller than the maximum building height at Grove Wood.
- e) The minimum footprint required - This remains the same for both sites and has not changed since the previous round of public consultation, in particular the option of using alternate cooling technology to minimise the footprint of the National Grid Substation has not been considered; and
- f) Careful design of the structure(s) - Detailed design of the structures has not yet been provided so this cannot be further assessed. However the local authorities would expect to see the following measures:
 - i. Recessive colouring and simplicity of form and design;

- ii. Meaningful lowering of the floor level of the building given the opportunities offered by a free draining substrate; and
- iii. An unlit structure, unless staff are present on site, with the use of Low Light surveillance or IR lighting to provide security.
- iv. Sighting of the connection infrastructure, such as Sealing End Compounds, in such a way as to minimise their impacts and ensure their landscape effects are capable of effective mitigation.

No details have been provided in relation to the design of the buildings. It is considered more likely by virtue of the nature of ground conditions at Broom Covert, that this site would offer the greater potential to lower the floor levels of the buildings, this must however be balanced against the higher maximum building height. It is also considered that the existing vegetation is likely to offer more timely and effective visual screening.

To these principles should be added that the site selection should seek a location and a cable route to that location that minimises potential harm and disturbance to biodiversity. Any unavoidable harm should be appropriately mitigated and fully compensated together with an indication of how this will be achieved. To enable this to be properly considered, the fullest possible survey information must be submitted to the local authorities – as and when it is available – for consideration and discussion. All of these assessments should take into account the in-combination effects with the other major energy projects proposed in the area, including Sizewell C, NGV's interconnectors and NGET's own sub-station.

Onshore visualisations

The local authorities' comments contained within the Phase 3 consultation response remain valid in relation to the visualisations of the Grove Wood site.

As part of the current consultation visualisations in relation to the Broom Covert, Sizewell site have been published. The visuals confirm the ability of the site to offer the opportunity to accommodate the onshore infrastructure in close proximity to similar infrastructure in a location already screened by landscaping and with the potential for additional screening.

Landscaping

Notwithstanding SPR's desire to select a site imminently and therefore the local authorities need to provide a view on the site selection. The local authorities recommend that prior to any decision being reached the two sites be assessed for landscape and visual impacts in a fully objective way, having full regard to the respective specific merits and characteristics of each site. It is recommended that a full Landscape and Visual Impact Assessment shall be carried out for both sites as part of the decision making process, and which shall be fully compliant with 'Guidelines for Visual Impact Assessment 2013 (GLVIA3)'. The fact that one of the sites falls within the AONB will be a material consideration in the assessment of that site, but it is not of relevance to the Grove

Wood site. The special qualities and characteristics of each site need to be fully understood, and any landscape designations are only part of that wider baseline understanding.

In relation to Grove Wood, the LVIA should take account of all aspects of the development proposal including impacts arising from the proposed substation access routes, especially where they depart from existing highway routes. The removal of field boundary hedgerows will need to be assessed against the assessment criteria set out in the 1997 Hedgerow regulations, and that includes any need to remove hedgerows as part of the cable route.

In relation to the Broom Covert site, the baseline assessment must include, not only the AONB special qualities as they apply to the site, but also the prevailing character of the site in its current context.

It is also important that any restrictions on new planting on both site resulting from overhead lines, cable runs, drainage provisions, are fully understood in order to have a realistic understanding of the effectiveness of the planting as mitigation of the impact of the proposed development.

Drainage

Both of the sites would be expected to comply with local and national guidance. Our Local SuDS guidance can be found here; <https://www.suffolk.gov.uk/roads-and-transport/flooding-and-drainage/guidance-on-development-and-flood-risk/>. The drainage strategies on the site would be expected not to increase flood risk off site up to and including the 1:100 + CC rainfall event.

Indicative Grove Wood, Friston Masterplan

The pluvial (surface water) flood path from north of Friston down through the village centre is clear to see on publicly available flood mapping. A large watercourse starts on Church Road and runs adjacent to Church Path, before being culverted below Low Road, where it eventually returns to an open watercourse. This is a clearly delineated flow path for surface water. It is not yet known how the proposed substation locations interact with the 1:100 year flow path, there is a concern that the NGET substation sits directly on this flow path. This will need to be considered during the design of this critical infrastructure.

The concern of residents is that creating a largely impermeable area upstream of the village will increase the rate and volume of surface water runoff, both of which would likely increase off site flood risk unless suitable mitigation is provided.

There are two potential methods for disposing of surface water generated from the site, infiltration or discharge to watercourse.

If infiltration is feasible:

The records contained on the British Geological Survey (BGS) website have been checked but no borehole records in the area where the substations have been proposed have been identified. BGS mapping does however show that soils are likely to have some permeability.

Provided the soils have good infiltration properties, it is feasible that the development could attenuate, treat and infiltrate all of their surface water on site (up to and including the 1:100 + CC event). Events exceeding the 1:100 + CC storm would likely follow the existing flow path down through the village. SPR may however wish to consider constructing a surface water system for larger events, the 1:200 + CC event, for example. This may then alleviate some of the concerns expressed by local residents.

It is important to note that despite the soil being permeable, at the moment in some storm events run off will be generated from this land which will flow towards Friston village. It is likely that events up to and including the 1:100 + CC event currently contribute some surface water flow. In order to fully understand the extent of this detailed modelling and soil analysis would need to be undertaken. Thus, by the development keeping surface water on site up to and including the 1:100 + CC event (or potentially greater) this could be a net benefit to decreasing flood risk in Friston.

These views are expressed based on any surface water drainage system being properly maintained and functional for the lifetime of the development. The site is located within a Source Protection Zone therefore there may be additional requirements in terms of surface water treatment prior to infiltration.

If infiltration is not feasible:

If infiltration is not feasible then the greenfield run off rates for the area proposed for development will need to be calculated using an acceptable method. The development will be required to ensure that the rate at which surface water is discharged from the site is no greater than QBAR (mean annual greenfield peak flow). This will provide betterment to the downstream catchment as rainfall events up to and including the 1:100 + CC event will be contained on the site proposed for development and released at the much lower flow rate of QBAR.

What else can be done?

The surface water flow path from the north of Friston down through the village centre is clear to see on flood mapping. It is possible that the risk of flooding to the village could be reduced by preventing this water from getting to the village so quickly. This could be achieved through Natural Flood Management (NFM). The purpose of NFM is to create localised natural areas for surface water storage which act as temporary attenuation structures during storm events. Holding a volume of surface water and releasing it at a (low) flow rate to reduce the volume of water in the channel during storm events. These structures can also incorporate permanent ponds to help improve the surface water quality whilst also providing environmental/amenity benefits. If the

soils in the area are permeable (thus likely sandy) there can be large volumes of silt contained in runoff. Ponds installed as part of NFM can trap this silt preventing it from filling the watercourses downstream through Friston (less silt in the watercourse = reduced flood risk). There may be benefit to the proposed development itself in exploring this option given it may be located within the pluvial flow path.

Through the use of NFM, as a net benefit to the community, SPR could make significant contributions to reducing downstream flood risk for fairly minimal costs when compared to more traditional 'hard engineering' methods. Further details regarding NFM can be found at this link, including details of an ongoing scheme in Debenham, Suffolk; <http://www.greensuffolk.org/flooding/hwmp/debenham-flood-management-project/>

NFM is not always suitable. Further studies and modelling would be required before any decision could be made regarding feasibility. If this is to be taken forward it would require liaison with multiple stakeholders including the village of Friston, Environment Agency and others.

Indicative Broom Covert, Sizewell Masterplan

The Broom Covert site has no significant identified risk of pluvial flooding. Information contained on the BGS website would suggest that soils are permeable. However, due to the proximity of the sea and the 'Sizewell Belts', groundwater levels may be high which could prevent infiltration (1m clearance to groundwater required).

The site would be required to comply with the SuDS hierarchy, infiltrating surface water on site if feasible. If this is not feasible then a discharge rate of QBAR would be permitted into the adjacent watercourse. The adjacent land has various environmental designations so additional surface water treatment stages may be required depending on the surface water discharge method.

Drainage summary

From a surface water flood risk perspective, the Broom Covert site is the more favourable of the two. It provides two feasible forms of surface water drainage with minimal risk to populated areas. The Friston site should not however be discounted due to the locally perceived increase in surface water flood risk without giving due consideration to the potential benefits this scheme could offer if delivered in a sustainable manner. These potential benefits are unlikely to be realised without this development given the current lack of funding for mitigation of surface water flood risk.

Heritage Assets - Archaeology

Whilst this area does have very high archaeological potential, with archaeological remains identified in the majority of previous archaeological works undertaken in the vicinity and numerous finds scatters, cropmarks and sites recorded on the County HER within this area, and there is also a need for this area to be subject to full archaeological assessment in order to understand the archaeological impacts of any proposals here, we believe that co-locating multiple major infrastructure schemes would have significant benefits. Whilst this would lead to a

cumulative impact in this area upon surviving archaeological remains, overall the scale of the scheme would be significantly reduced (in comparison to the Friston option) and would protect many known above and below ground heritage assets and areas of very high archaeological potential, which will be impacted upon should the Friston scheme progress. From a historic landscape/setting point of view, the Broom Covert scheme is certainly preferable than the Friston scheme which would impact upon numerous listed buildings, including a medieval church. Settings issues are less of a concern with the Broom Covert site and sensitive screening would also appear to be more achievable here.

The advice regarding the archaeological assessment and surveys which should be undertaken for the additional Broom Covert site is the same as that provided for the rest of the study area previously consulted upon. The same advice also applies for any other additional areas which have now been scoped in beyond the original red line boundary as part of this consultation (e.g. for access, surface water drainage and re-alignment works), as well as any other elements of the scheme which have yet to be defined and which may fall outside of the original study area, including compound locations, new access or transport routes, any road improvement works, utilities, landscape and screening areas and any defined alternative ecological mitigation areas to Broom Covert.

These areas should be included within the onshore cultural heritage desk based assessment for the project (including historic map regression, a study of aerial photography- including historical imagery, an assessment of LIDAR data, and predictive modelling of potential based upon topographic and geological evidence). Datasets held by the County Records office and other archive sources may also need to be consulted where features merit more detailed research. The desk based assessment should also consider the results of previous archaeological works undertaken in the Broom Covert area (which includes a geophysical survey at the junction of Sandy Lane and Lover's Lane for the Sizewell C scheme, geophysics and trial trenching on pillbox field also as part of the Sizewell C scheme, geophysical survey and trial trenching west of Lovers Lane again as part of Sizewell C and a number of phases of evaluation and excavation as part of the Galloper and Greater Gabbard schemes - all of which have identified important archaeological remains). A walkover survey should also be undertaken for Broom Covert, where a number of earthwork features have previously been identified, with a rapid earthwork assessment completed if appropriate, in order to identify any earthwork remains which should be avoided and preserved in situ.

A settings impact assessment for above ground heritage assets should be undertaken and the impact of the proposals upon historic hedgerows, boundaries and other historic landscape elements should also be considered through the use of historic mapping and Historic Landscape Characterisation data.

Heritage Assets - Listed Buildings

The Broom Covert site is located close to the existing large infrastructure of the Sizewell power stations and supporting buildings, this area already has a certain character as the result of these buildings that the proposed new buildings could easily fit into. Constructing the substations on this site would not impact the setting of any designated heritage assets. There are a number of entries on the Suffolk Historic Environment Record relating to the site and the area surrounding it however the substations would not cause harm to any designated heritage assets or their setting. The Sizewell site would also avoid the need for a long distance cable run that would potentially disrupt other designated and non-designated heritage assets

Within 1km radius of the Grove Wood Friston site there are six designated heritage assets:

- South - Grade II* listed Church of St Mary, Grade II Listed Church Walls Cottages and Woodside Farmhouse
- West - Grade II listed Friston House
- North – Grade II listed High House Farm and Little Moor Farm

There are several more designated heritage assets in the wider vicinity whose setting would potentially be impacted by the proposal, including the Grade II* listed Friston Post Mill. Due to the scale of the proposed buildings and the flat landscape the zone of visual influence of the proposal is very large. At this stage however the comments will focus on the six designated assets within the immediate vicinity as their setting is most likely to be impacted by the proposal to an extent that would cause harm to their significance. Further assessment of the other buildings in the wider vicinity will be necessary if this site is brought forward.

The NPPF (2018) defines the setting of a heritage asset as *'The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.'*

To the north of the site are High House Farm and Little Moor Farm; both Grade II listed 17th century timber framed farmhouses. Their current setting is within open fields, albeit with large pylons, and this agricultural landscape is important to their character and significance. The introduction of the proposed large scale buildings into this landscape would be incongruous and would be detrimental to the setting of the listed buildings. The history and use of these farmhouses is intrinsically linked with this landscape. The impact would not only be on views from the properties but also on views of the properties from across the landscape. The buildings are of a modest, functional scale and design commensurate with their historic use and would be completely dominated by the proposed scheme altering their historic relationship to the landscape.

To the west of the site is Friston House a large early 19th century yellow brick house. It is however not considered that the proposal will impact on the setting of the house as there is a densely

wooded section of the grounds to the east of the house. Therefore there is no existing relationship with the landscape in which it is proposed to situate the substation buildings.

To the south of the site are the church (C14/15 with some C11 material), Church Walls Cottages (C17 timber framed cottages) and Woodside Farm (C17 timber framed farmhouse). Due to their scale, use and location it is not considered that the proposal would impact on the setting of Church Walls Cottages. The concerns regarding Woodside Farmhouse match those outlined above regarding the farmhouses to the north. The substations would also negatively impact the setting of the Grade II* listed church. The setting of churches within villages is very important particularly in terms of inter visibility with the other buildings in the village and the surrounding landscape. The church is historically the focal point of the village and their scale and setting are designed to reflect this. Introducing such tall structures in close proximity to the church would challenge the historic relationship between the surrounding landscape and buildings with the church. Buildings that have always had a visual relationship with the church would possibly lose this as the result of this proposal.

Locating the proposed buildings at this site would result in less than substantial harm to the significance of a number of designated heritage assets. Accordingly this harm should be weighed against the public benefits of the proposal as set out in paragraph 196 of the NPPF. In heritage terms it is not considered that this is an appropriate site for the proposed development. Comments have already been provided in previous consultation responses regarding the impact of the cable run on the setting of Aldringham Court.

Residential Amenity

The cable route to Grove Wood, Friston crosses, three class B roads, numerous footpaths, woodland, a small river and passes close to a number of residential properties. Whilst this may be achievable it will cause major disruption during its construction in addition to the development of the substations. The Broom Covert, Sizewell site is more suitably located within a much shorter cable run to the landfall location.

The Grove Wood Friston site is in an exceptionally quiet location, a true area of tranquillity, where the daytime background noise levels are often below 30dBA and the night time noise levels are in the mid to low 20's dBA. This puts substantial restraint on construction methodology and permanent substation noise output. Noise mitigation at the Broom Covert Sizewell site will be a significant requirement and further assessment of the potential impact to residential receptors in this location will be required. However, assessment will need to take into consideration existing background noise levels and distances from residential receptors to the haul road and construction laydown areas proposed.

Although not referred to in the documentation provided, it would be a reasonable assumption that there would be significantly lower levels of construction dust emission during the development of the Broom Covert Sizewell site, when compared to the Grove Wood Friston site,

due to the reduced length of cable run to the landfall location. The local authorities would expect a construction dust impact assessment, with mitigation proposals, to be undertaken whichever site is chosen.

No information has been provided to date in relation to the impact of development at either site on local air quality. It is important that an air quality assessment is undertaken alongside the traffic assessment, so that any significant effect on sensitive receptors can be identified, and appropriate mitigation identified.

Socio-Economic Impacts

Both sites are within East Suffolk, a popular tourist destination. The AONB is a tourist attraction in its own right and has a number of tourist's footpaths across it. However, Friston is in equally beautiful rural countryside with popular footpaths and cycle routes. Both sites have the potential to be significantly disruptive to the tourist economy throughout their construction and potentially operational phases. Particularly without appropriate mitigation measures which are as yet unquantified.

It is considered that further assessment is required in this area to ensure that the rural economy is not adversely impacted by development in either of the proposed locations.

From a social perspective, Friston is a small rural community with limited local facilities, large scale infrastructure would be alien in that location and the potential harm to the local community arising from this during construction and operation needs to be assessed. Sizewell, is a small hamlet, Leiston a larger town, although used to large scale infrastructure in their vicinity, these proposals do not come with the benefit of employment opportunities post-the construction phase. This is the same for the Friston site. The limited long-term benefits of the offshore wind farms to the local area are very small. The operations and maintenance is likely to be operated from SPR's base in Lowestoft which is good for the north Suffolk economy but this benefit does not filter through to the onshore substation locations and this is a concern.

The cumulative impacts of these projects must also be considered in combination with Sizewell C and the interconnector projects. The projects collectively will place pressures on the construction skills sector. There is no indication at present as to how this would be handled in order to maximise benefits in the local area. As a consequence of the cumulative labour demand during construction periods, this would potentially exacerbate the pressure on the tourism industry in relation to the availability of accommodation in the local area.

Coastal Processes and Landfall

The landfall in relation to the projects will be the same regardless of the onshore site selection. The landfall is identified as north of Thorpeness. It is essential that the erosion risk at the landfall site is fully and robustly assessed to ensure that the shoreline set back distance for the transition bay is appropriate. It is also critical that the offshore cable routing presents no significant negative

impacts on Suffolk Coastal District Council's coastal management interests. It is understood that the seabed cable route will avoid the area of coralline crag formation present off the coast.

The indicative landfall area includes Thorpeness Common. Although this area is shown within the search area, it is hoped that it would not be utilised as this would be of concern to the local authorities and local residents.

Highways

In highway terms, if this proposal is taken in isolation, the preferred location for the substations would be at Sizewell. This location benefits from access via an accepted HGV (Heavy Goods Vehicle) route and a shorter cable route requiring fewer vehicle movements. Thus, consideration of this option as phase 3.5 of the consultation is welcomed. However, if constructed concurrently with Sizewell C there could be benefits to locating the sub stations at Friston. This would distribute traffic over a wider part of the network avoiding congestion on any particular route. For either option the impacts and necessary mitigation to reduce these to an acceptable level will be carefully considered.

Construction for the underground cabling and directional drilling is proposed via roads that are predominately on accepted HGV routes. We would expect that where necessary the applicant will use the haul roads and crossing points to gain access from within the site avoiding the use of minor unsuitable roads. A similar procedure has been followed during construction of the East Anglia One project and has generally been successful.

Generally, the access routes proposed are the most practical options and mostly avoid specific problems such as large urban areas and narrow roads. Much work remains to identify any necessary mitigation works once traffic flows are calculated and detailed surveys of the network complete. The local authorities' intention will be to ensure road safety is a priority particularly at those junctions where significant numbers of crashes occur.

To avoid doubt the local authorities would consider that the B1121 route to the Friston Substation would not be acceptable for HGV's. This is to clarify the apparent contradiction in the Information Leaflet which refers to this route and the Traffic and Transport Leaflet which dismisses the B1121 as a practical option.

Detailed analysis and comment on the impact of the development on the highway cannot be provided until further information is made available during the stage 4 consultation.

More detailed comments on the Highway Issues are set out below.

Detailed Highway Comments

Origin of HGV Traffic

While it is accepted that most Abnormal Indivisible Load's (AILs) will originate from the ports of Felixstowe or Lowestoft it is not likely to be the case for other HGV's. This will not change the traffic distribution on the county network but could affect it on the Strategic Road Network.

Proposed HGV routes to Grove Road, Friston

A1094/B1069/Haul Route (4.2.1): There have been significant numbers of crashes at the A12/A1094, A1094/B1069 Snape Crossroads and A1094/B1069 Knodishall Junction. The latter junction may also require improvements to the layout to enable HGV's to manoeuvre safely.

B1121 Route: While concerns have been expressed regarding the safety of the A12/B1121 junction there are significantly fewer recorded crashes at this junction than the A12/A1094 junction. However, the B1121 through Sternfield is narrow with a priority system adjacent to the river bridge. The road also has sharp bends and junctions with poor visibility.

The Traffic and Transport Factsheet identifies the A1094/B1069/Haul Road route as the preferred option. This document also lists other route options which have been assessed and reasons why many were not considered suitable. Although broadly in agreement with this assessment, it is recognised that improvements can be made to the selected route.

The proposed AIL route through Leiston to Grove Road Friston (4.2.2), while acceptable in principle for a small number of loads, will require formal approval which may include the inspection of structures along the route and that a specific pinch point is present on Haylings Road

Access to Broom Covert, Sizewell via Yoxford (4.3)

The B1122 follows an accepted HGV route. It is noted that this route passes through the village of Theberton where issues have been raised regarding road safety, in particular the lack of footways and crossing points for pedestrians. It would be expected that this matter is considered during further consultation.

Horizontal Directional Drilling (HDD) Site at Thorpeness (4.4)

Access to the HDD site at Thorpeness is more problematic. The proposed route is via the A1094 to Aldeburgh then the B1122 and B1353. This does require vehicles to turn at the A1094/B1122 roundabout in Aldeburgh which while practical for most HGV's may require traffic management and/or localised widening of the carriageway to allow larger vehicles to manoeuvre through this junction. The alternative route would be via the B1122 from Yoxford through Leiston to the B1353. This route would require HGV's to use Haylings Road and Kings Road, both narrow roads. Use of Aldringham Lane by HGV's is not considered practical, again due the narrow carriageway.

Access to the Cable Route (4.4.2).

The use of the three proposed accesses is accepted at the practical minimum. The use of approved access points for construction vehicles to access the site via haul routes and crossing points over minor roads has proved workable during the construction of EA1.

Traffic and Transport Improvement Works (4.5)

As a minimum we would expect a detailed transport assessment to underpin any application which would enable the local authorities to make an evidence-based response. This needs to include detail of HGV and other vehicular movements such as cars and LGV's to provide a full picture of the likely traffic generated. The Traffic and Transport Factsheet states that this will be the case in stage 4 of the consultation.

Road Safety

The local authorities are concerned regarding road safety as several significant numbers of crashes have been recorded at a number of sites, specifically:

- A1094 / B1069 Sternfield will need improvement for safety reasons
- A1094/A12 junction
- A1094 Snape Church

Permanent Access to Sub Stations

The permanent access to the substations at the proposed Friston site is shown to be from the B1121. It should be noted that the use of Church Road and Grove Road, Friston would not be acceptable for either temporary or permanent access. The proposed assess for the substations at Sizewell would be from Lovers Lane.

Details of the permanent access should be supplied in future consultations as should details of traffic generated by the development and a workplace travel plan.